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CLAIMS

1. A method for introduction or extraction of bioparticles into/from biological membrane-enveloped structures, comprising:

5 applying a magnetic alternating field to a sample comprising biological membrane-enveloped structures and magnetically susceptible particles, whereby an increase of the thermal and/or kinetic energy of said magnetically
10 susceptible particles causes the formation of pores in said biological membrane-enveloped structures,

which pores allows the introduction or extraction of bioparticles into/from said biological membrane-enveloped structures.

15 2. A method according to claim 1, wherein said magnetic field has an alternating field direction of a frequency in the range 1-5 MHz.

3. A method according to claim 1 or 2, wherein said magnetic field has a field strength of 1 mT.

20 *sub A1* 4. A method according to any one of claims 1-3, wherein said magnetic field is non-homogeneous and has an alternating gradient field direction, the direction of said alternating gradient field being generated by two coils, and said sample is inserted between the coils.

25 5. A method according to claim 4, wherein said coils are supplied with alternating currents of different frequencies.

30 6. A method according to claim 4, wherein said coils are supplied with either the positive or the negative part of the supplied alternating current.

sub A2 35 7. A method according to any one of claims 1-6, wherein said bioparticles are selected from the group comprising DNA molecules, RNA molecules, proteins, other biopolymers, peptides, chemical preparations, organic compounds, inorganic compounds or synthetic polymers or combinations thereof.

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8. A method according to any one of claims 1-7,
wherein said biological membrane-enveloped structures are
selected from the group comprising of body tissues,
cells, bacteria, virus particles, organelles at a
5 subcellular level, liposomes or proteins.

9. A method according to any one of claims 1-8, for
use for specific lysis of cells.

10. A method according to any one of claims 1-8, for
use for modifying the genetic code of a host cell and/or
metabolism.

11. A device for performing the method as defined in
any one of claims 1-10, comprising at least one coil for
generating a magnetic alternating field, optionally, a
thermostat for accurate temperature control of said at
15 least one coil, a means for variabel and accurate timing
control of the time during which said alternating current
is on and during which a sample to be treated is exposed
to said applied magnetic field, and control system for
accurate setting of strength and frequency of said
20 alternating current.

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